

IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently amended): A photovoltaic device, comprising a composition of carbon nanotubes and of at least one organic hole conductor, wherein [[the]] a band gap of said carbon nanotubes lies in the range of from about 0.5 to about 1 eV, and a band gap of the at least one organic hole conductor is in a range of from 1.75 to 2.25 eV.

Claim 2 (Previously presented): The device according to claim 1, further comprising:

- a first electrode on one side of said composition of carbon nanotubes and of at least one organic hole conductor, said first electrode having a first work function, and
- a second electrode on another side of said composition of carbon nanotubes and of at least one organic hole conductor, said second electrode having a higher work function than said first work function.

Claim 3 (Previously presented): The device according to claim 1, wherein said at least one organic hole conductor is a conjugated polymer or a blend of at least two conjugated polymers.

Claim 4 (Currently amended): The device according to claim 1, wherein said carbon nanotubes are ~~a mixture of metallic and~~ semiconducting carbon nanotubes.

Claim 5 (Currently amended): The device according to claim 1, wherein said carbon nanotubes are ~~a mixture of multi-walled and~~ single-walled carbon nanotubes.

Claim 6 (Previously presented): The device according to claim 1, wherein the carbon nanotubes have a diameter in the range of from 0.5 nm to 2 nm.

Claim 7 (Canceled).

Claim 8 (Canceled).

Claim 9 (Currently amended): The device according to claim 1, wherein said at least one organic hole conductor is selected from the group consisting of semiconducting organic materials with a ~~band gap above 1 eV~~ and a π -orbital higher in energy than the highest occupied molecular orbital (HOMO) of said carbon nanotubes.

Claim 10 (Previously presented): The device according to claim 1, wherein said composition of carbon nanotubes and of at least one organic hole conductor comprises a mixture of carbon nanotubes and at least one hole conductor.

Claim 11 (Previously presented): The device according to claim 1, wherein said composition is a two-layer-system, wherein said at least one organic hole conductor is in one layer and said carbon nanotubes are in another layer.

Claim 12 (Previously presented): The device according to claim 1, wherein said composition is a multiple-layer-system, wherein said at least one organic hole conductor and said carbon nanotubes are in alternating layers.

Claim 13 (Previously presented): The device according to claim 2, wherein said carbon nanotubes are vertical with respect to one of the electrodes.

Claim 14 (Canceled).

Claim 15 (Withdrawn): The device according to claim 2, wherein said carbon nanotubes have been horizontally aligned.

Claim 16 (Previously presented): The device according to claim 1, wherein said at least one organic hole conductor is selected from the group consisting of:

polymethacrylates and derivatives,

polyaniline and derivatives,

polyphenylene and derivatives,

polyphenylene vinylene and derivatives,

polythiophene and derivatives,

copolymers of triphenyl diamine derivatives and trimethoxyvinylsilane,

poly(3,4-ethylenedioxythiophene: polystyrene sulfonic acid) (PEDOT: PSS),

polyacetylene and derivatives thereof,

polyparaphenylene and derivatives thereof,

polypyrrole and derivatives thereof,

polyparaphenylene sulfide and derivatives thereof,

polycarbazole and derivatives thereof,

polyisothianaphene and derivatives thereof,

poly(1,6-heptadiyne) and derivatives thereof, and

polyquinoline and derivatives thereof.

Claim 17 (Previously presented): An organic solar cell comprising the device according to claim 1.

Claim 18 (Previously presented): The device according to claim 2, wherein said first and/or said second electrode is a film or layer of a transparent material.

Claim 19 (Withdrawn): The device according to claim 2, wherein said first or second electrode is a metallic electrode.

Claim 20 (Previously presented): The device according to claim 2, wherein said first and/or said second electrode is coated with a layer of fluoride or acetate or a combination of fluoride and acetate.

Claim 21 (Previously presented): The device according to claim 2, further comprising a substrate coated with said first or said second electrode, wherein the substrate is one selected from the group consisting of a solid inorganic crystalline substrate, a glassy substrate, a metal foil substrate, a stainless steel foil substrate, and a polymer substrate.

Claim 22 (Previously presented): The device according to claim 18, further comprising a flexible polymer substrate coated with said first or said second electrode.

Claim 23 (Previously presented): A combination of the device according to claim 1 with a circuit, wherein the device acts as an internal power supply.

Claim 24 (Previously presented): A solar cell comprising the device according to claim 1.

Claim 25 (Withdrawn): A method of generating electricity from light, wherein a device according to claim 1 or a combination according to claim 23 is irradiated by light, whereupon a photo-initiated charge-separation process and subsequently a charge-transport process occurs, and wherein further electricity is recovered from said device or from said combination.

Claim 26 (Withdrawn): A method of producing the device according to claim 2, wherein the at least one organic hole conductor is directly grown on said carbon nanotubes (“overgrown nanotubes”).

Claim 27 (New): The device according to claim 1, wherein said carbon nanotubes are single carbon nanotubes.

Claim 28 (New): The device according to claim 1, wherein said carbon nanotubes have a length of between 100 nm and 500 nm.

Claim 29 (New): The device according to claim 20, wherein said layer of fluoride or acetate has a thickness of 0.1 nm to 2 nm.